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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,705	01/17/2002	Christian Sauska	P-2410	1433

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EXAMINER

LEYBOURNE, JAMES J

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

6A

<b>Office Action Summary</b>	<b>Application No.</b> 10/051,705	<b>Applicant(s)</b> SAUSKA ET AL.	
	<b>Examiner</b> James J. Leybourne	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

1. The indicated allowability of claims 6-10, 12 and 17 are withdrawn in view of the newly discovered reference(s) to cylindrical ultraviolet lamps with an envelope having a non-uniform surface enclosing the cylindrical ultraviolet lamp. Rejections based on the newly cited reference(s) follow.

### ***Response to Amendment***

2. According to the "Amendment" received July 22, 2003, claims 12, 16 and 17 have been amended and claim 23 has been added.

3. Applicant's arguments with respect to claims 1-5, 11, 13-16 and 18-22 have been fully considered and are not persuasive.

In claims 1 and 6, the recitation "for use in a purification system" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claims 1, 6, 11, 12, 16, 17, 22 and 23, the recitation "is capable of creating turbulent flow" does not mean it does create turbulent flow, just that it

could under some possible use. Any lamp that is capable of creating turbulent flow in a fluid satisfies this limitation.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, are rejected under 35 U.S.C. 102(b) as being anticipated by Shurgan (USPN 3988633). Shurgan discloses a low-pressure discharge lamp, particularly a fluorescent lamp, having a plurality of separate and continuous

helicoidal grooves along its length (figures 4-5, and column 1, lines 11-18).

These lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

6. Claims 6-15 and 22-23 are rejected under 35 U.S.C. 102(a) as being anticipated by Eldred et al. (WO 01/37675 A2). Eldred et al. disclose an ultraviolet liquid sterilization system comprising a germicidal lamp surrounded by an envelope with helicoidal grooves along its exterior surface (figures 1-2, and pages 2-3, lines 19-2). These grooves create a turbulent flow in a fluid that moves across the surface of the envelope (abstract, line4). The system comprises an end cap 30 with electrodes extending through it, as shown in Fig.2. In one embodiment, Eldred discloses an envelope 23 that has a spiral groove extending along the inner face (page 6, lines 11-12).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wyndham (USPN 3791790) in view of Shurgan (USPN 3988633).

Wyndham discloses a purification device for fluids (Fig. 2, columns 4 lines 65-69 and column 5, lines 1-8) comprising a purifier chamber 13, which is an annular space where fluid being treated is forced through an annulus surrounding UV lamp 16 between the cylinder wall of chamber 13 and a concentric transparent cylinder 18.

Wyndham does not teach a germicidal lamp comprising a non-uniform contour capable of creating turbulent flow. Shurgan discloses a low-pressure discharge lamp, particularly a fluorescent lamp, having a plurality of separate and continuous helicoidal grooves along its length (figures 4-5, and column 1, lines 11-18). These lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

It would be obvious to one of ordinary skill in the art to replace the ultraviolet lamp of Wyndham with a lamp containing grooves as taught by Shurgan because Shurgan teaches these lamps permit a longer effective arc stream length in the same envelope thereby increasing the wattage loading of the lamp, have better recombination of the mercury ions in the plasma with the phosphor on the envelope wall to improve the efficiency (column 1, lines 30-35). As discussed under claim 1, these lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

9. Claims 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brais (USPN 5833740) in view of Shurgan (USPN 3988633). In Fig. 2, Brais discloses an air purification system comprising an ultraviolet lamp

38. He teaches that a motor-driven fan can be used to cause turbulence in the air in the vicinity of the vacuum UV source 18 (column 8, lines 56-60).

10.

Brais does not teach using a lamp with a non-uniform exterior surface contour capable of creating turbulent flow in the air. It would be obvious to one of ordinary skill in the art to replace the ultraviolet lamp of Brais with a lamp containing grooves as taught by Shurgan because Shurgan teaches these lamps permit a longer effective arc stream length in the same envelope thereby increasing the wattage loading of the lamp, have better recombination of the mercury ions in the plasma with the phosphor on the envelope wall to improve the efficiency (column 1, lines 30-35). As discussed under claim 1, these lamps are clearly capable of creating a turbulent flow in a fluid, including air that moves across the surfaces of the lamp.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (USPN 6053968) in view of Eldred. Miller discloses a room air purifier comprising an ultra violet lamp mounted within a chamber (envelope). Miller does not teach an envelope having an external non-uniform surface contour. Eldred discloses a liquid sterilization system using an ultraviolet lamp and an external envelope 34 through the liquid is passed. The envelope has a non-uniform contour for imparting turbulence to the fluid. It would be obvious to one of ordinary skill in the art to add a non-uniform structure to the walls of the chamber of Miller to cause turbulence because Eldred teaches that the

turbulence ensures that all of the fluid in subjected to UV light (pages 6-7, lines 18-1).

**Conclusion**

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on (703) 308-4116. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-7060.

November 2, 2003

JJL

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
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